



University of Glasgow
DEPARTMENT OF

**AEROSPACE
ENGINEERING**



**Development of A European Aircraft Design
Consortium In Higher Education.**

**TEMPUS JOINT EUROPEAN PROJECT 1179-91/2
Interim Progress Report
for Year 1991-1992.**

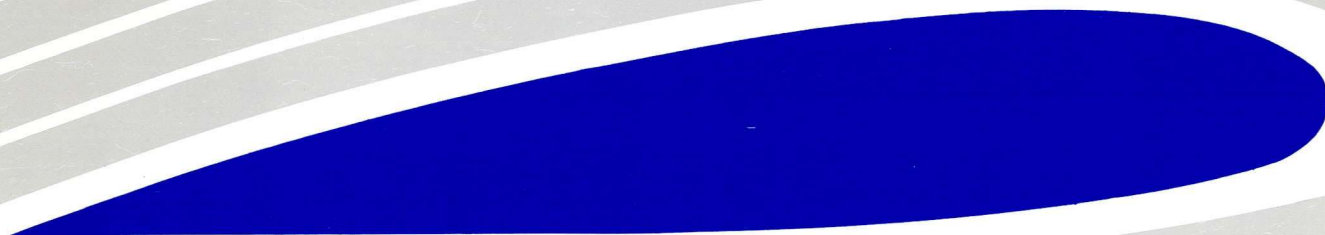
**by
R.Fletcher, L.Smrcek, F.N.Coton**

Departmental Report No. 9224

May 1992

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TEMPUS

Development of A European Aircraft Design Consortium In Higher Education.

JOINT EUROPEAN PROJECT 1179-91/2

Interim Progress Report Oct. 1st 1991 - Dec. 31st 1991.

by

R.Fletcher, Tempus Administrator, Dept. of Aerospace Engineering.
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Summary

The executive structure of the JEP is now well established as are the arrangements with the Technical University of Prague and Zivnostenska Banka in Prague for making Mobility 2 Grant payments in Western currencies to staff and students visiting EC locations from Czechoslovakia. JEP activities from October 1st 1991 are described in 7 main sections.

Key

In what follows, "The University" is Glasgow University, "The Department" is The Department of Aeronautical and Aerospace Engineering, Glasgow University, "CVUT" is the Technical University, Prague and "JEP" is Joint European Project.

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ACTIVITIES REPORT OCTOBER 1991 - DECEMBER 1991.

1. Administration.

A TEMPUS office is now well established within the Department of Aerospace Engineering at Glasgow University. Banking arrangements between Glasgow University, Zivnostenska Banka in Prague and CVUT have operated effectively. Details of transactions arrangements have been explained in the JEP Final Report for 1990/91 (Ref. 1) The administrative channels of communication are shown in Fig.1. The Glasgow coordinators and the JEP administrator feel that the JEP would benefit from the appointment of a part time administrator to assist Professor V. Broz in CVUT.

2. Mobility. Action 1

October 1991 Dipl. Ing. Ladislav Smrcek held a planning meeting with Professor P. Morelli of the Politecnico di Torino, Professor V. Broz of CVUT, Ing. Dr. A. Pistek of the Technical University of Brno and Professor K.Filakovsky, also from VUT, Brno. This meeting took place in Italy during the annual Meeting of the Italian Aeronautical Society. The partners from

Czechoslovakia were able to meet EC partners from Milan and aeronautical academic personal

from Naples, Bologna and Rome. Their meetings established the pattern for student and staff Mobility 2 assignments during the second year of the JEP and began detailed planning of equipment expenditure, see below, Section 4.

November 1991 Dipl. Ing. L.Smrcek visited Madrid on Erasmus business and used the opportunity to have discussions with the Czech student presently in Madrid, Mr. Pavel Rausa, and his Madrid supervisor Professor Martinez-Val. They discussed project work for a second Czech student due to visit Madrid on a study assignment from February 1992, and also the possibility of extending Mr. Rausa's assignment until June/July 1992 so that he can complete his Final Examination in Madrid.

November 1991 The Czech partners from CVUT and VUT held meetings in Brno to discuss the exchange programmes for 1992, to decide on methods for selecting students for these programmes and generally to discuss the Action 1 Equipment allocation to be spent substantially for the benefit of VUT, Brno.

November 1991 Mr. R. Fletcher visited Zlin Ltd., Cheltenham, UK for discussions with Thomas Heczko, the Czech student on assignment from Czechoslovakia, and his industrial supervisors. Whilst at Zlin Ltd., Mr. Fletcher and Mr. Heczko recorded interviews for a TV programme on the TEMPUS initiative currently being prepared for the European Task Force by Diverse Production Ltd., London, U.K. Mr. Fletcher was accompanied by Czech student Michal Urban, at present on 5 month study assignment in the Department. Mr. Urban was also interviewed for the TV programme.

November 1991. Mr. R. Fletcher and Professor V. Broz of CVUT attended the TEMPUS Workshop in Luneburg, Germany, organised by Professor Wald, of Hamburger Ausbildungspartnerschaft (HAP). The Proceedings of this useful and well attended workshop will be reported by HAP, but some of the difficulties and problems encountered in administering and coordinating JEPs which were raised at the Workshop will be mentioned below. (Problems, page 3)

3. Mobility. Action 2

Students from CVUT are at present on study assignments of 5 months duration in Glasgow, Toulouse, Stuttgart, Madrid and Torino. These visits started in academic year 1991/92. Professor V. Broz of CVUT has visited CVUT students on assignments in Torino, Toulouse and Madrid.

Details of the student Mobility 2 assignments for 1991/92 to EC locations from both CVUT, Prague and VUT, Brno, are being finalised from Czechoslovakia.

4. Equipment.

The 1991/92 equipment allocation will be substantially spent for the benefit of the Technical University of Brno. The details will be coordinated by Ing. Dr. A. Pistek, Department of Aeronautics, Technical University of Brno, and the Glasgow coordinators.

5. Course enhancement at CVUT

In January 1992, Dipl. Ing. L.Smrcek will undertake a teaching assignment in CVUT. During this visit he will have discussions with the Dean of Mechanical Engineering at CVUT to discuss curriculum development in the Faculty of Mechanical Engineering and in the Department of

Aeronautics (which is a Department of the Mechanical Engineering Faculty) in particular. The

emphasis will be on suggested revisions to CVUT Mechanical Engineering courses which will satisfy the accreditation requirements of the professional engineering Institutions in UK and EC countries.

6. Light Aircraft Designs/ Manufacture

The experimental results obtained by Glasgow students whilst in Czechoslovakia during the summer of 1991 have been analysed. Discussions with aero engine manufacturers is proceeding. Dipl.Ing. L. Smrcek will meet with the Czechoslovakian Design Coordinator and representatives of CVUT and VUT, Brno in December in Czechoslovakia to discuss the further progress of the project. The conceptual design process will begin in February 1992 when a team of Czech postgraduate students, working in Glasgow under Dipl.Ing/ Smrcek's direction, will start the theoretical analysis of the aerodynamic design of the projected light aircraft.

7. Complementary Activities.

The Glasgow Coordinators together with EC and Czechoslovakian partners intend to submit an application seeking support under the TEMPUS Complementary Activities Scheme to prepare, publish and distribute an EC Aeronautical Engineering Education Handbook. This will outline the structure of aeronautical engineering undergraduate courses in EC and Czech institutions in a way which will allow all concerned to easily compare courses available in the various participating Institutions.

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ACTIVITIES PLANNED FOR ACADEMIC YEAR 1991/92

Generally to implement the programme of Mobility 2 visits and assignments as detailed in the 1991/92 Contract Document and Annexes thereto, to continue development of the undergraduate course structure in Aeronautical Engineering at CVUT and in the Technical University of Brno, and to spend the minimum equipment allocation for 1991/92 substantially to improve aircraft design and testing facilities at undergraduate level in VUT, Brno.

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PROBLEMS.

The mismatch between the TEMPUS budget year and the academic years worked by the participating Institutions both in the EC and in Czechoslovakia posed problems in Year 1 (1990/91) of the JEP. In 1992, the situation will be improved somewhat in that budget allocation will be made known to coordinators earlier in the year, and hopefully in March/April rather than in July. Even so, planning Mobility 2 visits so that the annual programmes could be completed within a single academic year without overlapping two TEMPUS budget years would be made easier if the TEMPUS budget year were to run from (say) end of May to end of April. Extended student assignments could then be accommodated either in the long summer vacation - June to end of September, or in any combination of the teaching terms or semesters worked by EC and Czech institutions.

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References.

- (1) Final Report , JEP 1179/90. R.Fletcher, L.Smrcek, F.Coton, Glasgow, October 1991.